

Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the application.

1-9. (Cancelled)

10. (Currently Amended) A micromachined substrate comprising:

- a) a wet etched pit; and
- b) a dry-etched hole disposed in the wet etched pit, wherein the dry hole extends through the substrate.

11. (Currently Amended) The micromachined substrate of claim 10 wherein the substrate comprises structure is made of <100> silicon.

12. (Original) The micromachined substrate of claim 10 wherein the wet etched pits are anisotropically wet etched pits.

13. (Original) The micromachined substrate of claim 10 wherein the dry hole is centered in the wet pit.

14. (Original) The micromachined substrate of claim 10 further comprising an optical fiber disposed in the dry hole.

15. (New) A micromachined structure, comprising:

- a substrate;
- a first wet etched pit disposed in the substrate;
- a second wet etched pit disposed in the substrate, the second pit extending into the substrate a greater depth than the first pit; and
- a dry pit disposed between, and adjacent to, the first and second pits.

16. (New) The micromachined structure of claim 15, wherein the substrate comprises <100> silicon.

17. (New) The micromachined structure of claim 15, wherein the first and second pits each comprise a flat surface parallel to the upper surface of the substrate.

18. (New) The micromachined structure of claim 17, comprising at least one of a VCSEL or a photodetector mounted to the flat surface of the second pit.

19. (New) The micromachined structure of claim 15, wherein the dry pit is disposed within the second wet etched pit and wherein the dry pit circumscribes the first wet etched pit.

20. (New) The micromachined structure of claim 15, wherein the first wet etched pit comprises a V-shaped cross-section.

21. (New) The micromachined structure of claim 20, wherein the second wet etched pit comprises a pyramidal pit.

22. (New) The micromachined substrate of claim 21, comprising a ball lens disposed in the second wet etched pit and an optical fiber disposed in the first wet etched pit.

23. (New) The micromachined structure of claim 15, wherein the dry pit is a linear trench.

24. (New) The micromachined substrate of claim 10 wherein the dry hole is disposed off-center in the wet pit.

25. (New) The micromachined structure of claim 10, wherein the wet etched pit comprises a V-shaped cross-section.

26. (New) The micromachined structure of claim 25, comprising a plurality of dry-etched holes disposed in the wet etched pit.

27. (New) The micromachined structure of claim 10, wherein the wet etched pit comprises a pyramidal pit.

28. (New) A method for micromachining a substrate, comprising:

providing a hard mask on a selected portion of the substrate to provide a region of the substrate without a hard mask;

removing a portion of the substrate adjacent the region without the hard mask using one or more of ultrasonic drilling, laser etching, sawing and electrochemical etching to provide a micromachined feature in the substrate; and

wet etching the substrate to provide a wet etched feature adjacent to the micromachined feature.

29. (New) The method according to claim 28, comprising providing a fugitive material in the micromachined feature prior to wet etching the substrate.

30. (New) The method according to claim 29, wherein the fugitive material comprises one or more of a polymer, wax, and photoresist.

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Art Unit: 1775

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Amendments to the Drawings

Please amend the drawings by replacing the drawing sheets labeled "1/22" through "22/22" with the attached clean-copy drawing sheets. The drawing sheets have been amended to delete the claims and descriptive text therefrom, to number the views, and to provide reference numerals to various features illustrated in the drawings.

Attachment: 22 replacement sheets.